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IMB CORPORATION
INTELLECTUAL PROPERTY LAW
DEPT. IQOA/BLDG. 040-3
1701 NORTH STREET
ENDICOTT,, NY 13760

EXAMINER
LOFTUS, ANN E

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 June 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,11 and 21_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 11, and 21_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Status

1. This action is in response to the amendments filed on 6/14/07. The amendments accompanied an RCE, which was improper in that it was filed before any final rejection was mailed, so it was filed before prosecution closed. A formal notice of Improper RCE has been mailed.

A first final rejection was prepared slightly before the RCE arrived, and it was sent to the applicant 7/12/07. The MPEP says that amendments received with an improper RCE will be entered, but the final rejection mailed 7/12/07 did not take the amendments of 6/14/07 into account. Thus the examiner has prepared a second final rejection to address the amendment.

2. Claims 1, 11, and 21 are pending. Claims 2-10, 12-20, and 22-30 are cancelled. Claims 1, 11 and 21 are amended.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 11, and 21 have been considered but are moot in view of the new ground(s) of rejection.

4. By not traversing, the applicant has accepted the Official Notices taken in the first action as prior art of record, namely, that the following are old and well-known:

- deciding not to sell unprofitable items and

- identifying high profit items, mid profit items, low profit items and

  giveaways/incentive items

- and deciding not to sell items in certain profit categories.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 11 and 21 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter ' which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The following language is not supported by the specification :

"Performing, using said computing device, association analysis for only said bank using only said bank's plurality of bank products and only said bank's plurality of existing banking customers; said association analysis not performed for any retail business using any retail customers or retail data related to any type of retail services or retail store."

The specification indicates that the method can be used with "any company in any industry that sells multiple products and services to consumers" in lines 11-12 on

page 28. See also page 12 lines 8-11. Page 6 line 12 clarifies that existing and potential

customers are included.

Further, the term "preferred products" is not supported by the specification. While

it does say that major, important or strategic products would be included, there is no

reference to how to tell if a product is major, important, or strategic. It may depend on

the number of customers who hold the product, or its profitability or its history or its

visibility to management. It may be entirely subjective. Given a criterion, a person of

ordinary skill in the art may be able to determine the top product, but would not know

where to draw the line. The recited language about preferred products are those

purchased by customers who buy a minimum is not supported by the specification.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

8. Claims 11 and 21 recite "said computing device" in the third line. There is

insufficient antecedent basis for this limitation in the claim.

As to claims 1, 11, and 21, the specification refers to a retail bank in lines 10-11

on page 2. The claims then recite the limitations of applying to banking but not retail, yet

the specification addresses customer demographics as though the customers were

people and not wholesale businesses, thus implying retail. The metes and bounds of

the claim are unclear.

The terms "preferred" and "strategic" are ill-defined as discussed above, and

render the claims unclear.

The clause that begins with "storing" refers to storing and modifying the products

themselves instead of the product codes. A change in a product code is not a change in

a product, so this language is confusing.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 11, and 21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over

- US Patent No. 6272478 filed 12/31/97 by Obata in view of

- US Patent Application 20040064371 filed based on provisionals from 1999 by

  Crapo in view of

- US Patent Application No. 20020116237 filed 12/1800 by Cohen and in view

  of

- US Patent No. 6901373 filed 11/12/99 by Chasko, and in view of

- US Patent 5970476 filed 9/1996 by Fahey and in view of

- US Patent No. 6324523 filed 9/30/97 by Killeen et al.

11. As to the following claim language,

Said computing device including a controller, a network interface, a profitability analysis

device, a profit level categorization device, a data mining device, a cross selling opportunities

recognition device, and a storage device; said controller, said network interface, said profitability

analysis device, said profit level categorization device, said data mining device, said cross-selling

opportunities recognition device and said storage device coupled together with using a

control/data signal bus;

Although the terms listed in "said computing device including ... control/data

service bus" are supported in the specification, the specification also says on page 30

lines 27-33 that the invention is not limited to any particular combination of hardware

and software. Thus emphasis in examination will be on the features and functionality,

not the devices as such.

Obata teaches a data mining device in claim 1. Obata does not specifically teach

a controller, a network interface, a storage device and a control/data signal bus. In

paragraph 49 page 5, Crapo teaches a controller, a network interface, a storage device

and a control/data signal bus. Crapo teaches a data mining device in paragraph 47 also

on page 5. It would have been obvious to a person of ordinary skill in the art at the time

of the invention to modify Obata to add a controller, a network interface, a storage

device and a control/data signal bus because they are reliable and easily available

computer device components.

Obata teaches using the results of profitability analysis in col 8 line 56 to col 9

line 5. The existence of a profitability analysis device is inherent in the use of the results

from such a device. Obata teaches storing the product information in storage device in

Figure 1, item 16 (database). Obata teaches in col 7 lines 40-52 highlighting "large

profit" items and not displaying items whose profits fall below a threshold. Thus Obata

teaches profit categorization into three levels – large, below threshold, and above

threshold but less than large. Thus Obata teaches a profit level categorization device.

Obata does not specifically teach profitability categorization of products, just

associations. Chasko teaches profit level categorization of products in the abstract.

Inherent in the categorization is the existence of a device that performs the function.

Thus Chasko teaches a profit level categorization device. It would have been obvious to

a person of ordinary skill in the art at the time of the invention to modify the Obata

Crapo combination to include categorization of profit levels of products because it could

be stored with the product information and used for other decision-making and not just

cross-selling analysis.

The Obato Crapo Chasko combination does not specifically teach a cross-selling

opportunities recognition device. Cohen teaches a cross-selling opportunities

recognition device in claim 32. It would have been obvious to a person of ordinary skill

in the art at the time of the invention to modify the Obato Crapo Chasko combination to

add a cross-selling opportunities recognition device because that is one of the known

advantages of data-mining.

As it is the ordinary function of a control/data signal bus to couple devices

together, it would have been obvious to a person of ordinary skill in the art to couple

them with a control/data signal bus in order to use standard technology and avoid

custom hardware platforms. Thus the Obato Crapo Chasko Cohen combination teaches

the claim language cited above.

12. As to the next section of claim language, "said computing device performing association analysis for only said bank...retail store, it is rejected above as new matter.

13. As to the next section of claim language,

Said controller receiving via said network interface, a request for cross-selling opportunities identification; said controller initiating retrieval for each one of said plurality of existing banking customers from a bank's database of product information about said plurality of bank products, said initiating responsive to said receipt of said request;

The Obato Crapo Chasko combination does not specifically teach a request for cross-selling opportunities identification. Cohen teaches a request for cross-selling opportunities identification in claim 1. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the Obato Crapo Chasko combination to add a request for cross-selling opportunities identification because this would allow the system to use the most recent data to generate results when needed, as opposed to on a preset schedule.

The Obato Crapo Chasko combination does not specifically teach retrieval for each customer from a database of product information. Cohen teaches retrieval for each customer from a database of product information (sales data) in claim 16. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the Obato Crapo Chasko combination to teach retrieval of for each customer from a database of product information in order to get associations between customers and products that are useful for cross-selling.

As actions on a computer system occur in a controlled manner, it is inherent that

a controller is involved in their initiation. Since a network interface is a computer

system's link to the network, any requests coming from the network would pass through

the network interface. Thus the Obato Crapo Chasko Cohen combination teaches the

claim language cited above.

14. As to the next section of claim language,

> Said bank losing money on particular ones of said plurality of products when said
> particular ones of said plurality of products are purchased by particular ones of said plurality of
> banking customers;

The specification page two lines 18-20 states "On average, credit card companies only

start to make money in the third year of doing business with a customer," thus they lose

money the first two years. And further, beginning line 32 " most banks do not make

money from a large part of their customers for most products." Thus it was old and well-

known at the time of the invention for banks to lose money on particular products

bought by particular customers.

15. As to the next section of language,

> Means for temporarily storing said product information in said storage device; said controller
> instructing said profitability analysis device to operate on said stored product information, said
> profitability analysis device analyzing said stored product information to identify strategic ones of
> said plurality of products to form preferred products, said preferred products being only said
> strategic ones of said plurality of products, said preferred products being ones of said plurality of
> products that are purchased by ones of said plurality of banking customers that purchase at least

a minimum amount of said plurality of products; said profitability analysis device calculating a

profit for each one of said preferred products and not calculating profit for ones of said plurality of

products not identified as being one of said preferred products.

The Obato Crapo Chasko Cohen combination does not specifically teach temporarily

storing product information in a storage device. Fahey teaches temporarily storing

product information in a storage device in the abstract. It would have been obvious to a

person of ordinary skill in the art at the time of the invention to modify the Obato Crapo

Chasko Cohen combination to add temporarily storing product information in a storage

device because that would make it available to analysis and reporting systems.

The Obato Crapo Chasko Cohen combination does not specifically teach a

controller instructing said profitability analysis device to analyze said stored product

information to identify strategic ones of said plurality of products. In Col 12 line 42 to col

13 line 30 Fahey teaches a profitability analysis device operating on stored product

information. Inherent in the operation on a computer based device is the existence of an

operation controller that instructed the process to begin. Fahey also teaches preferred

or strategic (key) products in Col 12 line 42 to col 13 line 30. Thus Fahey teaches a

controller instructing said profitability analysis device to analyze said stored product

information to identify strategic ones of said plurality of products. It would have been

obvious to a person of ordinary skill in the art at the time of the invention to modify the

Obato Crapo Chasko Cohen combination to add a controller instructing said profitability

analysis device to analyze said stored product information to identify strategic ones of

said plurality of products in order to allow focused analysis.

The Obato Crapo Chasko Cohen combination does not specifically teach not calculating profit for ones of said plurality of products not identified as being one of said preferred products. In Figure 10, item 390, Fahey teaches profitability of key products excluding other products. Thus Fahey teaches a controller instructing said profitability analysis device to operate on said stored product information, said profitability analysis device analyzing said stored product information to identify strategic ones of said plurality of products to form preferred products, said profitability analysis device calculating a profit for each one of said preferred products and not calculating profit for ones of said plurality of products not identified as being one of said preferred products. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the Obato Crapo Chasko Cohen combination to add a controller instructing said profitability analysis device to operate on said stored product information, said profitability analysis device analyzing said stored product information to identify strategic ones of said plurality of products to form preferred products, said profitability analysis device calculating a profit for each one of said preferred products and not calculating profit for ones of said plurality of products not identified as being one of said preferred products because this focuses the analysis resources where they are most useful.

16. As to the next section of claim language,

Means for categorizing based on said profit that was calculated for each one of said preferred products, each one of said preferred products into one of three levels, which are based on said bank's situation; said three levels of profitability indicating a high level of profitability, a medium

level of profitability, and a low level of profitability, said low level of profitability indicating either

low profitability or negative profitability when each one of said preferred products that is

categorized into said low level of profitability is purchased.

Obata teaches in col 7 lines 40-52 highlighting "large profit" items and not

displaying items whose profits fall below a threshold, Thus, Obata teaches profit

categorization into three levels – large, below threshold, and above threshold but less

than large, which indicate high, medium and low profitability. Thus Obata teaches

Means for categorizing based on said profit that was calculated for each one of said

preferred products, each one of said preferred products into one of three levels, which

are based on said bank's situation; said three levels of profitability indicating a high level

of profitability, a medium level of profitability, and a low level of profitability, said low

level of profitability indicating either low profitability or negative profitability when each

one of said preferred products that is categorized into said low level of profitability is

purchased.

17. As to the next section of claim language,

Each one of said preferred products having an assigned original product code; for each one of

said preferred products: means for transforming said assigned original product code by

embedding one of said three levels into said assigned original product code to form a new

product code, said embedded one of said three levels being a level into which each one of said

preferred products was categorized; means for transforming said original product code into said

new product code by concatenating said original product code to form said new product code;

Obata teaches three levels of profitability. Obata does not specifically teach product

codes. Fahey in Figure 4F teaches product codes (product data) that includes price and

cost information. It would have been obvious to a person of ordinary skill in the art at the

time of the invention to combine Obata and Fahey to make product codes that include

three profit levels, because then the desirability of selling each product would be known

by inspecting its code. Further, since the profit codes would be stored in a database (as

per Fahey col 10 line 13), the database queries can be used to embed or concatenate

the data in any way desired. Thus the Obata Crapo Chasko Cohen Fahey combination

teaches each one of said preferred products having an assigned original product code;

for each one of said preferred products: means for transforming said assigned original

product code by embedding one of said three levels into said assigned original product

code to form a new product code, said embedded one of said three levels being a level

into which each one of said preferred products was categorized; means for transforming

said original product code into said new product code by concatenating said original

product code to form said new product code.

18. As to the next section of claim language,

Means for storing each one of said preferred products with said new product code that is

associated with said one of said preferred products to form modified preferred products; means

for processing said modified preferred products to identify associations among said modified

preferred products, said processing including performing data mining on said modified preferred

products to generate a plurality of association rules based on past behavior of said plurality of

banking customers;

The Obata Crapo Chasko Cohen combination does not specifically teach storing the

product codes in a database. Fahey teaches storing the product codes in a database in

col 10 line 13. It would have been obvious to a person of ordinary skill in the art at the

time of the invention to modify the Obata Crapo Chasko Cohen combination to store the

product codes in a database because databases come with built-in backup features.

The Obata Crapo Chasko combination does not specifically teach processing products

to identify associations among said modified preferred products, said processing

including performing data mining on said modified preferred products to generate a

plurality of association rules based on past behavior of said plurality of banking

customers. On page 1 paragraph 15 and in Fig 2 Cohen teaches processing products to

identify associations among said modified preferred products, said processing including

performing data mining on said modified preferred products to generate a plurality of

association rules based on past behavior of said plurality of banking customers

(generating association rules). It would have been obvious to a person of ordinary skill

in the art at the time of the invention to modify the Obata Crapo Chasko combination to

process products to identify associations among said modified preferred products, said

processing including performing data mining on said modified preferred products to

generate a plurality of association rules based on past behavior of said plurality of

banking customers in order to find out if there are populations who are particularly likely

to buy preferred products.

19. As to the next section of claim language,

A particular one of said plurality of association rules associating a Visa Gold credit card with a

housing loan, said particular one of said plurality of association rules including a support of .22, a

confidence of 10.7, and a lift of 13.3; said particular one of said plurality of association rules, an

identification that a Visa Gold credit card is high profitability and an indication that a housing loan

is high profitability; wherein said particular one of said plurality of association rules is Visa Gold

with High profitability associated with house loan of high profitability with support of .22, 10.7 as

confidence, and 13.3 as lift; said cross-selling opportunities recognition device analyzing said

plurality of association rules to identify a first subset of said plurality of association rules that

indicate said high level of profitability, said first subset of said plurality of association rules

including said particular one of said plurality of association rules.

Obata does not specifically teach support, confidence and lift. Cohen teaches support,

confidence and lift in Fig 2. Given a dataset and a rule, support, confidence and lift can

be calculated as attributes of the dataset and rule. It would have been obvious to a

person of ordinary skill in the art to calculate support, confidence and lift of a rule from a

dataset based on Cohen. If the dataset and rule are such that the claimed invention

would calculate values of .22, 10.7 and 13.3, then Cohen would also teach calculating

.22, 10.7, and 13.3. Obata does not specifically teach a housing loan and a credit card

as products. Cohen teaches a housing loan (HMEQLC) and a credit card (CCRD) as

products. Cohen does not specifically teach a Visa Gold card. Killeen teaches a Visa

Gold Card as a known bank product in col 11 lines 22-28. It would have been obvious to

a person of ordinary skill in the art at the time of the invention to modify Cohen to use a

Visa Gold credit card in order to get values for a popular product. It would have been

obvious to a person of ordinary skill in the art at the time of the invention to modify the

Obata Crapo Chasko combination to add an association rules associating a Visa Gold

credit card with a housing loan, said particular one of said plurality of association rules

including a support of .22, a confidence of 10.7, and a lift of 13.3 in order to describe a

dataset where that rule had been calculated with those numbers.

Obata does not specifically teach product codes that indicate profit levels. The product

codes (symbols) in Cohen's rules come from a table on page 2 paragraph 20. Cohen

does not specifically teach product codes that indicate profit levels. The Obata Fahey

combination teaches product codes that indicate profit levels as above. Thus it would

have been obvious to a person of ordinary skill in the art at the time of the invention to

modify the Obata Crapo Chasko Cohen combination to substitute product codes that

indicate profit levels within the rules in order to include more meaningful information in

the rule as displayed.

20. As to the next section of claim language,

Using said first subset of said plurality of association rules to identify first ones of said plurality of

bank customers to which to target marketing, a purchase of one of said preferred products by one

of said first ones of said plurality of bank customers resulting in said high level of profitability

occurring, means for generating one or more marketing strategies based on the first subset of

said plurality of association rules, means for cross-selling to said first ones of said plurality of

bank customers by marketing to said first ones of said plurality of bank customers

Obata teaches in col 7 line 52 to col 8 line 38 using said first subset of said plurality of

association rules to identify first ones of said plurality of customers to which to target

marketing, a purchase of one of said preferred products by one of said first ones of said

plurality of customers resulting in said high level of profitability occurring, means for

generating one or more marketing strategies based on the first subset of said plurality of

association rules, means for cross-selling to said first ones of said plurality of customers

by marketing to said first ones of said plurality of bank customers.

21. As to the next section of claim language,

Said cross-selling opportunities recognition device analyzing said plurality of association rules to

identify a second subset of said plurality of association rules that indicate said low level of

profitability; means for using said second subset of said plurality of association rules to identify

second ones of said plurality of bank customers to avoid marketing not targeted to second ones

of said plurality of bank customers, a purchase of one of said preferred products by one of said

second ones of said plurality of bank customers resulting in said low level of profitability

occurring; said second ones of said plurality of bank customers excluded from a next marketing

campaign, and wherein said first ones of said plurality of bank customers are good targets for ·

cross-selling and said second ones of said plurality of bank customers are avoided.

Obata teaches ordering associations by profitability and eliminating those below

a threshold in Col 7, lines 40-52. This effectively eliminates those customers from

prospective marketing efforts. Thus in context Obata teaches said cross-selling

opportunities recognition device analyzing said plurality of association rules to identify a

second subset of said plurality of association rules that indicate said low level of

profitability; means for using said second subset of said plurality of association rules to

identify second ones of said plurality of bank customers to avoid marketing not targeted

to second ones of said plurality of bank customers, a purchase of one of said preferred

products by one of said second ones of said plurality of bank customers resulting in said

low level of profitability occurring; said second ones of said plurality of bank customers

excluded from a next marketing campaign, and wherein said first ones of said plurality

of bank customers are good targets for cross-selling and said second ones of said

plurality of bank customers are avoided.

Conclusion

22. Applicant's amendment necessitated the new ground(s) of rejection

presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See

MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in

37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

23. Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Ann Loftus whose telephone number is 571-272-

7342. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, James Trammell can be reached on 571-272-6712. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AL
8/6/07

JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINE
TECHNOLOGY CENTER 3600